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REMARKS
ON
Cancer of the Prostate and the
Selection of Cases for Supra-
pubic Prostatectomy

*Delivered at the Medical Graduates' College and Polyclinic,
June 3, 1903*

BY
REGINALD HARRISON, F.R.C.S.

*Hunterian Professor of Pathology and Surgery (1890-91), and Vice-President
Royal College of Surgeons; Surgeon to St. Peter's Hospital, London*

[Reprinted from the "British Medical Journal," July 4, 1903]



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I PROPOSE offering you a few remarks on the subject of prostatectomy, and will commence by introducing a case which may be regarded as a typical one. I showed this patient at the Polyclinic a short time after the operation. Sixteen months have now elapsed, during which period he has been actively employed earning his living. Thus you may judge as to the permanent results which we may hope to obtain in well-selected cases after this operation.

The patient at the time of operation was 67 years of age. He has been under my notice since 1899, when I performed vasectomy for him for enlargement of the prostate. At this time the enlargement had made considerable advance, he was entirely dependent on the catheter, and had been so for some time, and this greatly interfered with his work as a compositor and seriously injured his health by preventing him obtaining sufficient continuous sleep and rest. The case proved too far advanced for vasectomy, and the relief he obtained from this operation was insufficient.

On February 5, 1902, after examining his prostate and bladder with the cystoscope, I performed supra-

pubic cystotomy for him and enucleated separately with my finger the two large lateral masses I am now showing you (fig. 1). The prostatic urethra remained intact. The total weight was 5 oz. The patient made an uninterrupted recovery, the function of the bladder has been completely restored, and the use of the catheter discarded since the day the operation was performed.

If the conditions could always be secured as they existed in this instance, the operation of prostatectomy would be attended with very little risk, whilst the results would be uniformly good. In the study of the various forms and structures the enlarged prostate presents will be found the key to the application of operative surgery to this part.

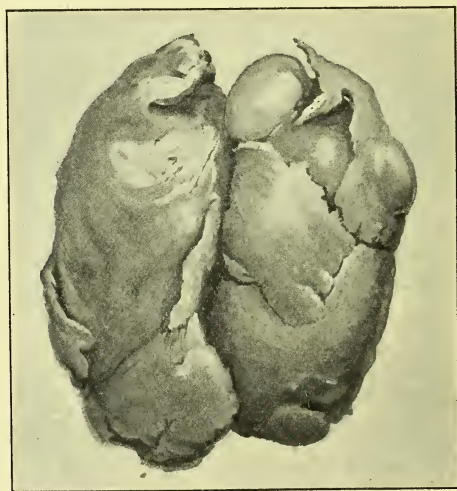


FIG. 1.

The first question I would raise is relative to malignant disease of the prostate—is it common or not, and what should be our attitude to it? My belief is that carcinoma of the prostate is far more common than we have been led to believe. In performing over 100 vasectomies on different persons for enlargement of the prostate, the operation failed to benefit the patient in several instances, for the reason that the growth proved to be carcinomatous.

And this leads me to consider how we are to recognise this state, and thus to avoid attempting useless prostatectomies. In the early stage there is considerable difficulty in doing this. Carcinoma of the prostate is not infrequently met with in younger persons than in the ordinary forms of prostatic enlargement or adenoma. Cancer of the prostate may occur at or about the age of 50, and in this respect corresponds with carcinoma of the female breast. It is usually associated with considerable lumbar and sciatic pains. Later on it involves more or less of the chain of glands in the groin, including the femoral, which it indurates. Examination by the rectum not only finds the gland of stony hardness but of marked fixidity on pressure. Slight hæmorrhages are occasional, but serious alterations in the character of the urine and obstruction to catheterisation are often delayed. Loss of flesh is usually noted. These are the ordinary symptoms of carcinoma of the prostate.

In several instances I have seen, where the diagnosis was verified by microscopical examination, the disease was marked by slow progress and the slowness of the local symptoms that were present throughout. It appeared to prove fatal by the general decay that was induced rather than by any interference it occasioned with the function of micturition, thus contrasting with advancing forms of ordinary prostatic hypertrophy.

On the other hand, the adenomatous prostate, which often assumes very considerable dimensions, and is best suited for treatment by prostatectomy, presents very different local conditions. When examined by the finger in the rectum there is a feeling of less fixidity about it relative to the pelvis. The bowel is freely movable over it. Though firm and bossy to the touch it is wanting in that feeling of stony hardness which is so characteristic of the carcinomatous prostate.

Where an operation is contemplated no examination for the purpose of diagnosis can be considered complete without the use of the electric cystoscope. Upon this often turns whether a prostatectomy should be undertaken at all, or whether the case permits of the substitution of a more limited proceeding, as will be illustrated later on. As viewed by the cystoscope the differences

between hypertrophy and carcinoma may thus be stated.

Carcinoma of the prostate, in by far the greater proportion of cases, is of a hard and slow-growing nature, closely resembling scirrhous of the breast, both microscopically and to the naked eye. As a rule there is not very much intravesical projection of the prostate in these cases, and what there is is of an uneven and irregular outline. On the other hand, the large, soft adenomatous prostate presents, as a rule, a considerable enlargement into the bladder cavity with a smooth, rounded surface. The most general arrangement of these adenomatous masses are these :—

(1) As a collar-like general enlargement of the prostatic ring encircling the prostatic portion of the urethra.

(2) As an enlargement of the two lateral lobes, thus squeezing and flattening the urethra from side to side, the greatest diameter of that passage thus becoming vertical.

(3) An enlargement of the posterior or middle lobe, either as a sessile, rounded swelling under the mucous membrane of the apex of the trigone, or with a thick pedicle, thus closely resembling a fibro-papilloma in appearance.

(4) Or there may be a combination of any or all of the preceding varieties.

It is thus obvious that the cystoscopic appearance of the adenomatous prostate varies very much according to the direction of the growth. Usually the contour can be made out fairly accurately, and the observer can say that he has to deal with a lateral lobe enlargement, a collar-like enlargement with projecting middle lobe, or an enlargement mainly of a pedunculated nature. The importance of this is obvious, for in the last-mentioned case a simple twisting off of the pedunculated middle lobe would be sufficient to relieve all symptoms, as I shall presently show, and is a much less serious proceeding than removing the whole of the enlarged gland. It should also be noted that the mucous membrane covering the very large adenomatous masses is often of a peculiarly glistening character, and sometimes presents little cyst-like swellings, which, when viewed in profile, are semi-translucent. I have not observed this appearance in cases which eventually turned out to be carcinoma.

I am laying considerable stress on the importance of recognising carcinoma or cancer of the prostate when it is the cause of the enlargement, and distinguishing it from ordinary hypertrophy or adenoma, for the reason that it may be little short of a calamity to submit a person to a prostatectomy should the enlargement eventually turn out to be of a malignant nature without knowing it. Formerly it was not a matter of so much importance when the catheter and the irrigating syringe represented the mechanisms commonly employed in the treatment of prostatic obstruction, for to this extent malignant and non-malignant growths might be treated on almost identical lines. At the present time these conditions are changed, and now that the prostate is approached operatively much on the same principle as the breast and other organs of the body, it is of the first importance that we should recognise beforehand the precise nature of the enlargement we have to deal with.

I have within the last two years performed prostatectomy in two cases which speedily proved to be carcinomatous. I think such cases should not be allowed to pass without notice in relation to the subject I am now dealing with, and I will therefore briefly give some particulars and show what was removed.

CASE 1.—The first case was that of a patient, aged 64, whom I saw in 1901. He complained of frequency of micturition, both day and night, and occasionally involuntary dribbling. A catheter had been passed before I saw him, but there was no residual urine. It was therefore clear in this instance that the frequency of micturition was not due to retained urine but to some other cause of irritation. The patient's history pointed to previous attacks of renal colic, for which he had been under treatment at Carlsbad. The last attack of renal colic had been two and a half years before I saw him. He had passed uric acid gravel in the urine, but not stone. Examination by rectum showed the prostate to be extremely hard, particularly at one point, where it gave the sensation as if a stone was impacted there. Further, the patient complained of dull aching about the buttocks and thighs. The muscles were flabby and the patient was losing flesh. He complained much of the frequency of micturition,

which disturbed his rest and greatly distressed him both day and night. As there was no residual urine to draw off the catheter was useless so far as this symptom was concerned.

Later on some difficulty arising out of the increasing size and hardness of the prostate occurred, and the use of the catheter then became necessary. Occasionally a few drops of blood were passed. I was not able at that time to detect any enlarged glands either in the groins or femoral regions. The patient became very anxious about his condition, and having heard of cases where the prostate had been successfully removed, he was desirous, other measures failing, of submitting to this operation. I gave it as my opinion that the case was not a favourable one for prostatectomy, as it was not unlikely the growth would recur, and that there could be no guarantee that the whole of the disease was removed at the time of the operation, as is the case with adenomas involving the part. On the other hand, the patient urged the pain and frequency which attended the introduction of the catheter, and the uselessness of all the means that had hitherto been employed to relieve him. I could not absolutely deny the possibility of the growth proving to be one of those densely fibrous prostates which are occasionally met with. But in my judgment the weight of evidence was against this.

However, at the request of the patient an attempt was made to extirpate the gland by the suprapubic route. I felt to some extent justified in doing this, for the reason that it was evident no long time could elapse before it would be necessary at all events to open the bladder for the purpose of allowing the urine to escape. The prostatic urethra was rapidly becoming blocked up by the invading growth and catheterism would soon be impossible. Prostatectomy was therefore performed in February, 1902, four months after the patient had been under my observation. The prostatic mass could not be enucleated with the finger, and had to be removed in several portions in this way.

The progress of the case was disappointing. Though the patient received immediate relief by the freedom with which the urine escaped by the open wound, and

got rid of the distress connected with catheterism practised under great difficulty, the growth within three or four weeks of the operation returned in the original site. It became necessary to fit a permanent drain pipe in the suprapubic opening, which enabled the patient to pass urine painlessly during the remainder of his life. The prostatectomy, however, proved useless, and the patient died from the recurrence of cancer in the part four months after the operation which had been undertaken for its removal. Secondary growth manifested itself in the spine about the ninth and tenth dorsal vertebræ. On microscopical examination the growth proved to be of a mixed character. The periphery of the mass was adenomatous, whilst the centre was carcinomatous. The growth cut like scirrhus of the breast, and yielded typical "cancer juice" on scraping. Mr. Watson Cheyne saw the patient in consultation with me.

CASE 2.—The second case was that of a professional man, aged 61, who consulted me in April, 1901, for frequency of micturition. As in the preceding case, the use of a catheter indicated that there was no residual urine in the bladder to account for this symptom, and that some other cause for it was to be sought. The prostate was examined per rectum, and it was found to be large and hard. It was noted, however, that the rectum was freely movable over it, and that the growth was not unduly fixed within the pelvis. I did not see the patient again till January, 1902, when the symptoms had become more urgent. The frequency of micturition had greatly increased, and with this a necessity for the use of the catheter.

These symptoms were so urgent that on January 5 suprapubic prostatectomy was performed. What was apparently a fibro-adenoma of the prostate was enucleated with some difficulty in two pieces by the finger. The bladder had evidently for some time been immensely distended. The mouths of the ureteral orifices were so large that they would each admit the tip of the forefinger. The naked-eye appearance of the growths was that of an adenoma, which the first microscopical examination confirmed. A further examination, which

included a complete section of the mass removed, unmistakably indicated its carcinomatous nature as in the previous case.

Early in April, 1892, this patient sailed for the Cape in a professional capacity, apparently in excellent health, and passing urine quite naturally. About four months after operation he had one or two slight attacks of hæmaturia, which were evidently connected with recurrence at the original site. He was able, however, to complete two more voyages out and home, when he returned to this country with the abdominal cicatrix and contiguous glands largely involved in carcinoma, and with the scrotum and legs much œdematous. This had all taken place within the course of sixteen months.

During the last few months my attention has been called to several instances of prostatic enlargement, which should be included with those I have just mentioned. They are not cases which should be submitted to prostatectomy. At all events, the prospect of recurrence should have full consideration.

But though a deliberate prostatectomy may not be advisable in cases of this kind, there can be no doubt that carcinoma of the prostate often, sooner or later, leads to conditions where operative interference is called for; I refer more particularly to the effects of obstruction so caused upon the contents of the bladder. A suprapubic opening may give immense relief to the patient whose bladder is distended with clots or foul urine. This is a substitute for a catheter which may be advantageously utilised.

I would like to say a few words in reference to some modern developments relative to the treatment of certain inoperable forms of prostatic obstruction. I refer to those instances where the enlargement is presumably of a cancerous nature. It is a painful thing for a surgeon to say to a patient, "I cannot advise the removal of your enlarged prostate, for the reason that it is probably malignant." "Is there nothing you can offer?" is probably the rejoinder to this. Within the last few months my attention has been directed to the use of the Röntgen rays and high-frequency currents in some of these inoperable cases of prostatic carcinoma to

which I am referring. This is ground upon which I would tread with much caution. My interest was first drawn to this subject by some admirable papers on the use of the X-rays and the Finsen light in connection with the treatment of lupus and other semi-malignant forms of ulceration. At the present time I have two cases of malignant disease of the prostate, or what I take to be such, under daily treatment by means of these agencies. In alleviating pain, and in apparently favourably influencing the further development of these growths as judged by the patient's sensations, physical condition, and examination of the part with the finger, I am favourably impressed by what I have seen. The process is a painless one, and will be continued on the ground that it appears to have contributed to the comfort of the patients. It seems impossible that so powerful an agency can be brought into contact even momentarily with living tissues without influencing their nutrition. Whether for good for evil, or for neither, in instances such as these has yet to be determined. I think, however, from what I have seen, it is worth a trial ; and this it is having.

To revert. I opened these remarks by illustrating what may be regarded as the total enucleation of the contents of the prostatic capsule. I will now consider some cases where partial prostatectomy may be substituted.

If we study a number of specimens of enlarged prostates, we shall find in a certain proportion that the obstruction is occasioned by a limited portion of the gland which has become hypertrophied or excessive. The most common form of this variety is where the floor of the gland becomes pendulous, and by blocking micturition renders the natural escape of urine as impossible as if the orifice of the bladder were commanded by what is known in mechanics as a ball valve. In all other respects these prostates are naturally disposed. Let me illustrate what I mean by a case.

In April, 1899, I saw, at the request of Sir Douglas Powell, a gentleman, aged 55, who was suffering from stone in the bladder. I performed litholapaxy upon him, and removed a stone composed of oxalates and

phosphates weighing over $\frac{1}{2}$ oz. I should mention that he had been using his catheter for twelve months, and had been absolutely dependent upon it for three weeks before the operation. The patient made a rapid recovery from the operation, though he was never able to dispense with the use of the catheter afterwards.

In August of the same year the operation of litholapaxy had to be repeated, as in this short interval another stone had formed, which was also successfully

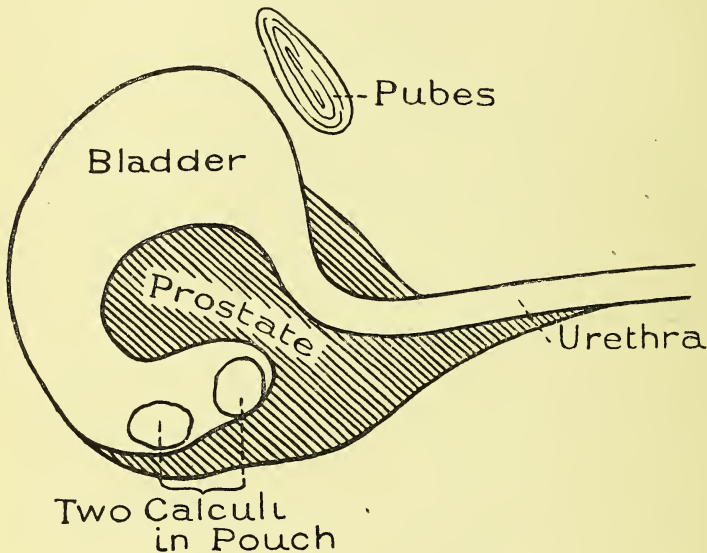


FIG. 2.

removed in the same way. On this occasion the stone was formed of phosphates, which is the usual kind in the case of recurrences. Again he made a speedy recovery so far as the removal of the stone was concerned. The patient, however, still remained dependent on the use of the catheter. By September, 1900, he had formed other stones, which were removed in a like manner. He still remained dependent on the use of the catheter. For the fourth time, in February, 1901, he again applied to me with symptoms of stone. Feeling sure that

this rapid recurrence of stone was not due to any fault in the operation or to any want of care on the part of the patient or his medical attendant, before proceeding to remove the stones I examined the patient with the cystoscope. The view thus obtained of the interior of the bladder was extremely interesting. There was no enlargement of the lateral lobes of the prostate, but the third or middle lobe was prolonged, and took the form of a pendulous mass which projected upwards into the bladder, and evidently played the part of a ball valve (fig. 2). Thus the urine was mechanically prevented escaping from the bladder, except when the catheter was used, and being allowed to decompose, the formation of phosphatic stones necessarily followed. I should add that under cover of the projecting lobe of prostate a portion of two calculi were seen by the cystoscope. This condition at once explained how these stones were formed, and I decided upon removing that portion of the prostate which was hypertrophied, as well as the stones it partially concealed. It seemed to me quite unnecessary to remove the entire prostate, and I therefore advised the minor operation.

This was done by opening the membranous portion of the urethra on a grooved staff, as if for median lithotomy; this enabled me to pass a pair of forceps into the bladder, with which I seized and twisted off the polypoid excrescence of prostate as you see in the specimen. Subsequently I withdrew two calculi and introduced a temporary perineal drainage tube into the bladder. In a few days the latter was withdrawn, when the wound rapidly closed.

It is now over two years since this operation was done, the patient has had no further recurrence of stone, and what is also of great importance, he has never had occasion to use the catheter since, though he had been dependent upon this instrument for so many years previously.

It was quite clear in this case that the partial enlargement of the prostate which I have described was the direct cause of the recurrence of stone from which this patient suffered for so many years. Further, this case illustrates the great assistance the cystoscope affords in all cases of this kind. It clearly showed how

limited the prostatic enlargement was, and how this could be removed by a very simple and safe operation. The days are now passed when the cystoscope was regarded as a toy. Everyone who desires to obtain a practical knowledge of the disorders affecting the urinary tract must make himself acquainted with it if he desires to diagnose and treat correctly the disorders of this part.

Partial operations on the prostate must be limited to such conditions as I have just illustrated. They are not to be recommended when the entire organ is more or less involved in a hypertrophy. Two instances have recently come under my attention where no permanent good followed suprapubic cystotomy and the removal of some portions of the enlargement. In one the suprapubic opening never closed, as the urine failed to escape by the natural channel, whilst in the other, though the suprapubic wound healed by the aid of a retained catheter, the patient could never dispense with the latter instrument. In the latter case I advised that an attempt should be made later on to rectify this by a more complete enucleation of the balance of prostate that remained. This I heard was followed by a most satisfactory result, the patient within a month after the revised operation obtaining full voluntary power over the act of micturition, besides other advantages.

There is another point to which I should like to refer in connection with the subject of entire enucleation of the prostate as now practised.

There can be no doubt that in the majority of these cases the prostatic urethra is more or less damaged, if not entirely removed. This is evident from the examination of specimens after removal.

This mass, which weighs 3 oz., and the stone below it, was removed from a gentleman, aged 60, in November, 1901. He had been completely incapacitated from professional work by the constant use of the catheter. He is now in excellent health and urinates normally, though his prostatic urethra was included in what was removed (fig. 3).

The question has been raised, Is there not some liability to what amounts to a urethral stricture after a wound of this kind? I have met with an instance where there is

some evidence of this being the case. The prostate was removed from a gentleman, aged 67, in February, 1902. The urethra was somewhat freely separated on the anterior aspect of the prostate in front of the junction with the membranous portion. The whole canal was no doubt much toughened by the very long dependence on the catheter, and by no less than eight crushing operations for stone which had preceded the prostatectomy.

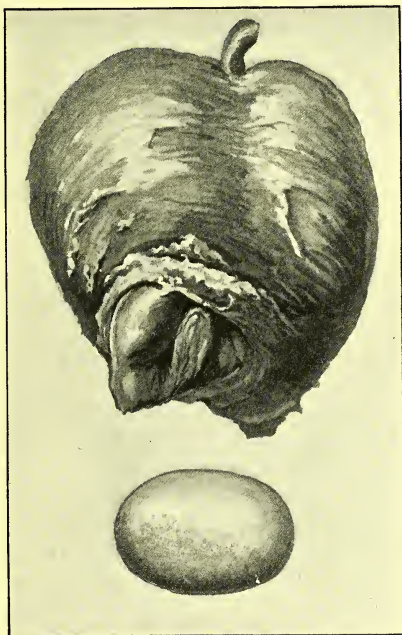


FIG. 3.

Since the latter operation this patient has had some trouble in passing urine. Sometimes a good stream passed, at others no urine could be voided until after the introduction of a bougie. A good stream then immediately followed. Apparently there was an obstruction of a valvular nature which thus caused the difficulty in urinating. It could not be called a stricture, as after the hitch was overcome just at the entrance to the bladder

a No. 14 metal bougie, English gauge, passed easily. Three months after the prostatectomy I passed a urethrotome and divided what seemed to be a fibrous band or bend at the point where the hitch occurred. This completely freed the urethra for all purposes and the patient has since had no further trouble in urinating naturally with a large stream.

The narration of the last case leads me to give prominence to a method of dealing with some forms of prostatic enlargement which seems to have some advantages I will presently note.

In 1881 I read a paper before the Royal Medical and Chirurgical Society, based on some cases where tumours of the prostate had been successfully enucleated in the course of operation for stone in the bladder, by lateral and bilateral lithotomy, and I advocated the proceeding as bearing upon the remedying of prostatic enlargement "by means other than those commonly recognised."*

The most striking case I then recorded was that of a man, aged 67, with a large oxalate stone in his bladder and an hypertrophied prostate, who was sent to me by Dr. H. G. Samuels, when I was surgeon to the Liverpool Royal Infirmary, and upon whom I operated in September, 1881. As the stone and prostate were both large I made a bilateral section of the latter by means of which I removed the stone with forceps and enucleated with my forefinger the obstructing prostatic mass, which proved to be a considerable adenoma. The patient made a good recovery and completely recovered his voluntary power of micturition. The specimen was again shown at the Manchester Meeting of the British Medical Association (1902) in the course of a discussion on prostatectomy.

In the discussion which followed the reading of my paper before the Royal Medical and Chirurgical Society, Sir Henry Thompson, Sir William Savory and Mr. Christopher Heath took part, when it was stated by the first named speaker that my suggestion "was practical and well worthy of consideration."

* *Trans. Royal Med. Chir. Society*, vol. lxxv.

After the lapse of twenty years I have deliberately applied the process which in my first paper I regarded as "an accident" occurring in the course of a lateral lithotomy operation. I have very little doubt, in the light of what is now being done in regard to prostatectomy, more especially in its relation to cases complicated by vesical stone, that what I described as being undesignedly done in 1881, probably represents in 1903, in conjunction with the closure of all perineal cystotomy wounds, by the use of sutures and suitable drainage tubes, a most efficient and rational method of dealing with this combination of disease. In this way provision is made for the removal of the stone, the obstruction contained within the prostatic capsule, and for the restraint of hæmorrhage in a combined manner which has not been previously attempted. I will proceed to mention particulars of a case where this process was recently employed.

It was that of a member of our own profession whom I saw in February this year (1903). Twenty-five years previously he had a stone removed from the bladder by crushing, by Mr. Christopher Heath. He remained well until two years ago, when symptoms of enlarged prostate caused him much continuous pain. I examined him under an anæsthetic later on, and found the prostate unilaterally enlarged to a considerable extent. Though he was not dependent on the catheter his calls to urinate were frequent and distressing and I concluded that it was best to make an exploratory incision within the area of the prostatic capsule, and to remove an obstruction which I believed to be what Sir Henry Thompson described many years ago, "as a prostatic tumour encapsuled in the interior of the gland."

For this purpose I made the ordinary incision as for lateral lithotomy, which gave free access through the membranous urethra to the prostate and enabled me to readily remove the tumour I am now showing (fig. 4, natural size). It is figured exactly as removed by enucleation with the finger.

It will be seen that it is about the size and shape of a tennis ball. Had I required more room or found it necessary to enucleate the opposite lobe, the bilateral

incision through the prostatic capsule would have provided this.

Enucleation was readily effected by using the two forefingers of my right hand whilst downward pressure was exercised above the pubes with the left, the entire operation only occupying a few minutes.

One of my gum-elastic drainage tubes (fig. 5) was



FIG. 4.



FIG. 5.

passed through the wound into the bladder, and the incision closed around it firmly with sutures.

I would incidentally mention that for some years preceding the more general adoption of litholapaxy as a substitute for lithotomy, I had been in the habit of thus closing perineal wounds made for the latter purpose. In this way hæmorrhage was arrested and by conveying the urine outside the bed patients were kept dry throughout.

Further, the dependency of the drainage as compared

with suprapubic cystotomy certainly favoured more rapid repair. In forty-eight hours or so the stiff gum elastic drainage tube, which permits of side-packing with gauze if hæmorrhage continues, was removed and a soft rubber one, with control tap for the urine, was substituted.

The patient left hospital within a fortnight from the date of operation, though the wound had not completely healed. His condition is greatly improved and the function of micturition is so completely restored that he is looking forward to resuming professional employment. Two months after the operation I had the pleasure of submitting the patient to Mr. Heath, together with the growth¹² that had been removed.

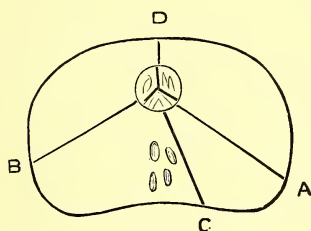


FIG. 6.

An idea may be formed as to the amount of room afforded for withdrawing a growth or stone from the bladder, and for conducting the necessary manipulations with the finger, from the accompanying diagram (fig. 6). It was made from the transverse section through the middle of a frozen gland, and shows the lines of a lateral and a bilateral section, as well as other directions of incision. In the enlarged prostate these dimensions may be considerably increased without impinging upon the capsule. It will be observed that the downward or upward incisions through the prostatic area from the urethra, which would correspond with a median perineal section, offer a more limited access as compared either with the lateral or bilateral incision, single or combined. Further, the latter two will drain incontinently without a tube should this for any reason be required, whilst this is not the case, or very imperfectly

so, with the median sections. Further, it is to be remembered that the downward incision into the gland necessarily sacrifices the ejaculatory ducts, should this be a point deserving consideration.

The chief advantages connected with this form of prostatectomy are that the bladder is not opened, no portion of the urethra is removed, the after treatment is more comfortable to the patient as not entailing a suprapubic opening, and a more rapid convalescence.

The procedure I have described is an interesting example as to how history may repeat itself in connection with surgical work. Further, it illustrates how accidents, or what Paget spoke of as "calamities in surgery," may be importantly utilised. We have another illustration of this in the failures of nephrotomy, contributing to the development of important observations in connection with the treatment of some forms of albuminuria and nephritis by surgical means, a subject in which I have also been much interested.

In two instances I will briefly narrate suprapubic prostatectomy followed some weeks after perineal drainage had been employed for the relief of retention and purulent cystitis. In each case at that time the patients were in too serious a condition for submitting to removal of the prostate.

The first instance was that of a patient aged 63, who I saw in consultation early in 1901 with Dr. Sharman of Sydenham. There was a previous history of a severe spinal injury, and the local condition rendered it likely that there was a suppurating sac entering above the large prostate, the contents of which were discharged into the bladder. For two years he wore his control drainage tube with considerable comfort, and his health improved. After consultation with his medical attendants, Dr. Umney and Dr. Hale White, I advised a suprapubic prostatectomy, which was performed in March, 1903. Six months after this operation he writes me, "I have been to Brighton for a month. The amount of pus does not decrease, but the removal of the prostate certainly has caused me to suffer far less inconvenience."

The second case was that of a patient aged 73, who I saw in consultation with Dr. E. J. Lewis, Mr. Edmund

Owen and Sir Thomas Smith during the early part of 1903. His condition in the first instance was a very serious one from prostatic obstruction and suppuration. As a temporary expedient, as in the previous case, perineal puncture was performed. After this he improved slowly, and as there was every prospect of his having to wear the drainage tube for life he preferred to undergo, later on, a more radical procedure. His appetite and strength having been greatly restored, perineal prostatectomy was performed five months after the previous operation. There was nothing particular to note except that a stone was found concealed by the lobes of the prostate (fig. 7).



FIG. 7.

He had been sounded previously without it being detected. Its relation to the prostatic lobes showed this to be impossible. The Rontgen rays might perhaps have indicated its presence. Both wounds healed well and quickly, the perineal opening favouring this by supplying a means for dependent drainage.

In reference to the mortality of prostatectomy, I do not think the number of cases or the periods of time they cover are sufficient at present to enable us to arrive at conclusions which can be deemed very guiding or conclusive. Information for this purpose should be of

the fullest kind, and include partial as well as complete prostatectomies, whether suprapubic or perineal. I am not at all sure^a whether what are called "partial prostatectomies" are not the more fatal of the two, as these would include the malignant and fibrous types of prostatic enlargement, as opposed to the adenomas, which are easily and quickly shelled out with little or no hæmorrhage.

I am disposed to think that the mortality which would embrace these varieties is not much less than what Fuller placed it in his earlier articles * on suprapubic prostatectomy, namely, 15 to 18 per cent. Even if brought down to a 10 per cent. mortality this should make us careful in advising it or in setting aside what the catheter and the wash bottle can do, though fully admitting the inconvenience of these.

If these operations were confined to the enucleable adenomas, or, to use the term applied to them by Sir Henry Thompson, prostatic tumours encapsuled in the interior of the gland, I have very little doubt that the mortality would be considerably lessened. It is where severe structural lesions have to be inflicted for the purpose of effecting removal with the finger where risk comes in, in the form of shock or hæmorrhage, and it is to some of these cases that the term partial removal is assigned for obvious reasons.

Enlargement of the prostate is a wide subject, and permits of a good deal of variety in treatment, operative and otherwise. In placing these views before you I think we are much indebted to my colleague, Mr. Freyer, for the communications he has made, here and elsewhere, in reference more especially to suprapubic prostatectomy.

The following reference to the subject discussed in the early portion of this address is of interest :—

METASTATIC DEPOSITS OF CANCER IN THE BONES IN CASES OF CANCER OF THE PROSTATE (*L'Echo Médical du Nord*, July 19, 1903).—Messrs. Carlier and Davranche have raised in this article several questions of considerable interest which

* "Diseases of the Genito-Urinary System" (Macmillan, 1900).

are but little mentioned in text-books, and yet are deserving of more attention than is usually bestowed upon them.

It has been realised of late that cancer of the prostate is not so rare a condition as was formerly believed, and the authors quote a certain number of observations which confirm this statement. Thus Albarran and Hallé, in an important research as to the histological character of the prostates removed *post mortem* from 100 cases in which prostatic "hypertrophy" had been diagnosed, discovered no less than fourteen to be carcinomatous in nature. This research only illustrates the difficulty of a differential diagnosis between the firmer varieties of prostatic enlargement of an innocent nature, those to which the term "fibrous enlargement" may be applied, and the slow-growing form of carcinoma, which is the variety of cancer most commonly met with. Professor Carlier himself, in a recent article, has communicated observations of a similar character.

It must not be forgotten that simple growths of the prostate have an undoubted tendency to take on a malignant character in a certain small proportion of cases.

The difficulty of differentiating between simple and malignant enlargement of the prostate is still further increased by the fact that the clinical symptoms are—at least in the earlier stages—identical, and depend solely upon the mechanical obstruction to micturition common to both. The usual course of prostate carcinoma also is excessively slow compared with cancer in certain other regions.

From these considerations of the characteristics of prostatic cancer the authors draw these conclusions: First, that many cases are passed over owing to the small size of the growth, and the fact that it gives rise to no symptoms other than those attributable to the early stages of so-called prostatic hypertrophy; and, secondly, that a very careful examination of the bones is necessary in most cases to discover evidences of secondary growth. They consider that in all cases of cancer of bone the prostate should be most carefully examined.

A very complete analysis of the literature relating to this subject is included in this paper, and the authors then proceed to a discussion of those bones most commonly affected, and a consideration of the routes by which infection takes place. The subject is one of considerable interest, not only from an academic standpoint, but also from a practical aspect. Surgical interference, with enlargement of the prostate, has gone forward with great rapidity recently, and more than one instance is known where growths of a doubtful character have been removed. At present the general conclusion has been arrived at that removal of prostatic carcinoma is scarcely justified, from the fact that it is almost

impossible to be sure of extirpating the disease locally. If to this is added the knowledge that secondary growths of bone undoubtedly occur even when the primary growth of the prostate is of very small size, the wisdom of hesitation in resorting to the use of the knife appears to be still more manifest.—J. G. P. (*Treatment*, August, 1903).